

**REMARKS****1. Request for continued examination:**

5       The Applicant hereby requests continued examination of the  
above-indicated application as per 37 CFR 1.114.

      The amendments made to the claims in the above section are  
over the last entered amendment filed Jul. 27, 2004.

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**2. Claim amendments:**

      Claim 1 is amended only to correct an informality.

15       Claim 12 is introduced and contains no new matter. With  
regard to the patentability of claim 12 over the cited art,  
please refer to the argument for claim 1 below.

20       **3. Claims 1-11 are rejected under 35 U.S.C. § 102(b) as being  
anticipated by Hashimoto et al., U.S. Patent 5,963,516  
(hereafter Hashimoto):**

Response:

25       The Applicant respectfully requests that the Examiner  
elaborate on how the arguments below, originally presented in  
reply to the Office Action of Oct. 14, 2004, do not place the  
claims in condition for allowance (as stated by the Examiner  
in the Advisory Action mailed Jan. 27, 2005).

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      Claim 1: Regarding the rejection of claim 1, the Examiner  
indicates that the claimed invention is taught by

Hashimoto in that primarily, the "TE SET TO Vc" signal referred to in Fig.17 of the cited art relates to "corrected tracking error signal" of the claimed invention. The Applicant points out that there is  
5 significant difference both between the two waveforms, and the direction of the respective inventions. Chiefly, the claimed invention, being directed at high-speed track locking in an optical disc drive, produces a corrected tracking error signal by mirroring the  
10 off-track portion of the tracking error signal from a reference point onwards (as illustrated by Fig.4 of the claimed invention application disclosure), i.e. at a point where the optical pick-up head transitions from on-track to off-track. Whereas Hashimoto, being  
15 directed at reducing tracking error offset due to non-linearity in the optical pick-up head light path, seeks to reduce accumulated error in the DC bias of the tracking error signal by simply masking the off-track portion of same, i.e. the tracking error signal is held  
20 at zero volts for the duration of the off-track period. Hence, while both the "TE SET TO Vc" signal of the cited art and the corrected tracking error signal of the claimed invention both feature the on-track portions of their respective tracking error waveforms, the  
25 off-track portion of the cited art merely remains at zero volts until the beginning of the next on-track period. The claimed invention corrected tracking error signal waveform, however, features a mirror of the tracking error signal for the corresponding off-track  
30 period.

The Applicant therefore asserts that both the

derivation and direction of the corrections to the tracking error signal of Hashimoto's invention and that of the claimed invention are different, as can be seen by comparing the Applicant's corrected tracking error signal 52 of Fig.4 with Hashimoto's "TE SET TO Vc" signal of Fig.17. The Applicant asserts that the nature of the claimed invention corrected tracking error signal is unambiguously reflected by the base claim reciting "when the pick-up device is located at a target track related to the off-track period, the corrected tracking error signal being modified from a reference point onward, to mirror the subsequent half cycle of the tracking error signal," and clearly supported in the specification and drawings. Similarly, Hashimoto does not teach or fairly suggest the "TE SET TO Vc" as "modified...to mirror the subsequent half cycle of the tracking error signal." Thus, reconsideration of claim 1 is politely requested.

Claim 2: Regarding claim 2, the Applicant seeks to clarify that 'the mirror signal' referred to is not the mirror signal known within the art as the discrete signal representative of whether the optical pick-up head is positioned on or off track, rather it refers to the mirror of "the subsequent half cycle of the tracking error signal" mentioned in the base claim. That it is not the 'mirror signal' of the prior art as defined above, is supported by context, i.e. that it (the mirror signal) "is obtained by taking the reference signal as a reference to convert the tracking error signal", which as will be appreciated by one versed in the art, does not describe the prior art mirror signal. Claim 2, being

dependent upon claim 1, should be allowed if claim 1 is found to be allowable.

5 Claim 3: Regarding claim 3, as Hashimoto teaches referencing the off-track portion(s) of the corrected tracking error signal to zero volts and claim 3 refers to the corresponding off-track periods according to the claimed invention, by Hashimoto's teachings the tracking error signal cannot be proportional to  
10 anything during these periods (except a zero value), and consequently cannot reflect the conditions stated by claim 3, i.e. that "the corrected tracking error signal is approximately proportional to a distance between the pick-up device and the target track." Claim  
15 3, being dependent upon claim 1, should be allowed if claim 1 is found to be allowable.

Claim 4: Regarding claim 4, the on-track portions of the tracking error signal and the corrected tracking error  
20 signal are the same, i.e. the aforementioned portion of the tracking error signal is unmodified by the claimed invention. Hence claim 4 is included by way of further defining the claimed invention and, being dependent upon claim 3, should be allowed if claim 3  
25 is found to be allowable.

Claim 5: Claim 5, being dependent upon claim 1, should be allowed if claim 1 is found to be allowable.

30 Claim 6: Claim 6, being dependent upon claim 5, should be allowed if claim 5 is found to be allowable.

Claim 7: Regarding claim 7, the Examiner's rejection of this claim is based upon similar reasons to those set forth against the method base claim, claim 1. Therefore if the argument included herein in support of claim 1 is found to be persuasive and claim 1 allowed, claim 7 should also be allowed. Reconsideration of claim 7 is politely requested.

Claims 8 & 10: Claims 8 & 10, being dependent upon claim 7 and having been rejected for similar reasons, should be allowed if claim 7 is found to be allowable.

Claim 9: Claim 9 is an apparatus claim corresponding to claim 4 and dependent upon claim 7, and hence should be allowed if claim 7 is found to be allowable and the arguments pertaining to claims 1 or 4 be considered persuasive.

Claim 11: Claim 11, being dependent upon claim 10 and having been rejected for similar reasons, should be allowed if claim 10 is found to be allowable.

The Applicant respectfully requests that all claims be considered in light of the arguments set forth herein, and that the rejection be withdrawn.

Sincerely yours,

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